

Department of Energy/Western Area Power Administration Joint Outreach Team,

I am the Electric Director for the City of Healdsburg, a small public utility in Northern California. We serve approximately 5,500 customers 78,000MWh annually. Over 40% of our load is sourced from California Certified Renewables. When large hydros are included, the City's renewable, carbon free generation climbs to 70%. This is a high standard of renewable resource, likely one of the highest in the Nation.

System reliability, including transmission reliability, is generally measured by the duration and frequency of power interruptions. Reliability is also measured by the amount of time the system is available (Average System Availability). The system availability for transmission typically reaches percentages higher than 99.999%. Presented with these numbers, efforts to obtain the last one one-thousandth are met with the significant question of the total cost value of the remaining percentage. The benefit to cost ratio for this remaining reliability improvement is difficult to justify, as the costs are incredible high. The justification becomes even more so in a struggling economy.

I have heard numerous claims from the DOE that today's transmission grid has been neglected, is in dis-repair with significant amounts of deferred maintenance, and is a simply relic of the 19th century. An objective assessment of today's transmission grid finds the application of modern technologies, operating practices, and system maintenance practices.

Primary in DOE's comments is the premise that the transmission grid is well beyond its existing life. Many years ago Age Based Maintenance was replaced with Condition-Based maintenance. The true life expectancy of a transformer, as determined by its condition, exceeds fifty years and can remain in-service well beyond this date. Dissolved Gas Analysis (DGA) provides the true life expectancy of a transformer. DGA is a modern practice and has been widely adopted by the industry as effective. Other condition based maintenance programs include wood pole test and treat programs, infrared inspection to find and replace hot splices prior to failure, ultra violet cameras to find insulators that are beginning to track, and many other quantifiable diagnostics to predict equipment failures. As these modern techniques identify potential issues, those components are surgically removed and replaced minimizing the cost of maintenance while also avoiding potential outages.

Today's grid has been modernized through the use of improved technologies such as microprocessor relays, advanced protection schemes, dynamic VAR support, improvements in line construction and operating practices, and many other improvements. It is clear that the DOE has not well defined their intention and the exact problem(s) to be solved, the proposed scope and desired outcome, and the process for gaining input from industry experts, preference customers, and the end users. Without adequate planning, the improvements DOE suggest (near the point of mandating) will fall short of providing benefit to the preference customers and the end users. To provide the best economical and operational solutions, the DOE must stop their current course of action, and re-engage with the preference customers as to their needs and their understandings of the needed (if any) areas of improvement.

Regards,

Terry Crowley P.E.

Electric Director

City of Healdsburg